



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,928	10/22/2001	Steven M. Knowles	10765-015001	8524
7590 05/08/2006 STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036			EXAMINER BOCHNA, DAVID	
			ART UNIT 3679	PAPER NUMBER

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/982,928	KNOWLES, STEVEN M.	
	Examiner	Art Unit	
	David E. Bochna	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,7,10,12 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,7,10,12,41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coutu.

In regard to claim 1, Coutu discloses a flexible joint assembly for conducting a fluid, comprising:

- a joint assembly inlet 14a;
- a joint assembly outlet 14a; and
- a fluid flow path between the inlet and the outlet, the fluid flow path including:
 - a first pivot joint (8 and 13a);
 - a second pivot joint (8 and 13a), wherein each of the first pivot joint and second pivot joint independently comprises a ball and socket joint, wherein each ball and socket joint comprises:
 - a socket 3;
 - a ball 13a received in the socket;
 - a seal 5 between the ball and the socket, and each ball and socket joint further comprises a compressing member 10 axially compressing the seal between the ball and the socket and a retaining ring 9 compressing the seal between the ball and the socket; and

Art Unit: 3679

a unitary central fluid conductor 2 fluidly coupling the pivot joints wherein the central fluid conductor 2 couples (via 8) to a first ball 13a of the first pivot joint and a second ball 13a of the second pivot joint, and each retaining ring 8 compresses the seal by threadably connecting to a surface of the socket 3 adjacent to the central fluid conductor and the ball,

wherein the pivot joints together provide greater than a 60 degree bend between the inlet and the outlet and each pivot joint independently provides greater than a 35 degree bend in the fluid flow path (each pivot 13a appears, from the drawings, to have at least a 45 degree range of motion off of the central axis). The central fluid conductor 2 of Coutu has a length , but Coutu does not disclose the exact length of the conductor. However, it would have been obvious to one of ordinary skill in the art to make the conductor shorter than 10 centimeters because a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

In regard to claim 7, the first pivot joint and the second pivot joint together provide a substantially 90 degree bend between the inlet and outlet (each pivot 13a appears, from the drawings, to have at least a 45 degree range of motion off of the central axis).

In regard to claim 10, where the inlet and outlet include a fitting (threaded interior or exterior 14 or 14a).

In regard to claim 12, each pivot joint independently provides greater than a 40 degree bend in the fluid flow path (each pivot 13a appears, from the drawings, to have at least a 45 degree range of motion off of the central axis).

3. Claims 1, 7, 10, 12 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrison in view of Shames et al.

In regard to claim 1, Morrison discloses a flexible joint assembly for conducting a fluid, comprising:

- a joint assembly inlet 41;

- a first pivot joint;

wherein each of the first pivot joint comprises a ball and socket joint, wherein the ball and socket joint comprises:

- a socket 15;

- a ball 20 received in the socket;

- a seal 24 between the ball and the socket, and the ball and socket joint further comprising a compressing member 26 axially compressing the seal between the ball and the socket and a retaining ring 28 compressing the seal between the ball and the socket and a unitary central fluid conductor 22.

Morrison does not disclose a second joint assembly connected at the other end of the unitary central fluid conductor 22 that is less than 10 mm long. However, it would have been obvious to one of ordinary skill in the art to make add an identical pivot joint assembly to the second end of 22 because duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Further evidence that it is common and well known in the art to add a ball at both ends of a unitary central conductor is demonstrated by Shames et al.

Morrison is silent as to the full angle at which the joint can be bent, however Shames et al. also demonstrates that it is common and well known to provide a flexible joint connector with pivot joints that together provide greater than a 60 degree bend between the inlet and the outlet

Art Unit: 3679

and each pivot joint independently provides greater than a 35 degree bend in the fluid flow path (see fig. 5 of Shames et al.). Therefore it would have been obvious to modify the joint of Morrison to bend more than 40 degrees, because the practice allowing ball and socket joints to bend at least 40 degrees is common and well known in the art, as demonstrated by Shames et al.

The central fluid conductor 22 of Morrison has a length , but Morrison does not disclose the exact length of the conductor. However, it would have been obvious to one of ordinary skill in the art to make the conductor shorter than 10 centimeters because a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

In regard to claim 7, the first pivot joint and the second pivot joint together provide a substantially 90 degree bend between the inlet and outlet (see fig. 5 of Shames et al.).

In regard to claim 10, where the inlet and outlet include a fitting (threaded interior or exterior 17).

In regard to claim 12, each pivot joint independently provides greater than a 40 degree bend in the fluid flow path (see fig. 5 of Shames et al.).

Response to Arguments

4. Applicant's arguments with respect to claims 1, 7, 10, 12 and 41 have been considered but are not persuasive.

In regard to Coutu, the final office action did not include a rejection of claim 41 in view of Coutu.

The rejection of claims 1, 7, 10 and 12 in view of Coutu is maintained because Coutu discloses a retaining ring 8 compressing a seal 11 by threadably connecting 20 to a surface of the

Art Unit: 3679

socket 3 adjacent to the central fluid conductor 2 and the ball 13. There is no requirement in the claims that the thread on the retaining ring thread to an interior surface of the socket, and the term “adjacent” is so broad that the thread and socket of Coutu anticipate the claim.

In regard to Morrison in view of Shames, Morrison discloses a retaining ring 28 threadably connected to a surface of the socket 15 adjacent to the fluid connector 22 as ball 20 is part of the fluid connector and flange 27 is adjacent to the connector 22 and/of ball portion 20. Again, the term “adjacent” is broad enough to be anticipated by the ring 28, socket 15 and fluid connector 22 of Morrison, which are all “adjacent” one another as they are in radial contact with each other. Shames is used only to teach that it would have been obvious to add a second ball to the opposite end of the fluid conductor.

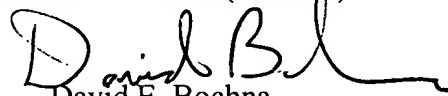
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Bochna whose telephone number is (571) 272-7078. The examiner can normally be reached on 8-5:30 Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3679

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "David B.", with a long horizontal flourish extending to the right.

David E. Bochna
Primary Examiner
Art Unit 3679